

ABSTRACT OF THE DISCLOSURE

A low noise, high sensitivity and wide dynamic range uncooled type infrared sensor can effectively reduce the influence of fluctuations of the gate of the amplifier transistor. The infrared sensor comprises an imaging region containing thermoelectric conversion pixels arranged two-dimensionally in the form of a matrix of a plurality of row and a plurality of columns on a semiconductor substrate to detect incident infrared rays, column selection lines, vertical signal lines, said column selection lines and said vertical signal lines being arranged the imaging region, amplifier transistors configured to be modulated by the respective signal voltages generated in the signal lines, storage capacities connected respectively to the drains of the amplifier transistors and configured to store signal charges from the transistors, a plurality of reset circuits for resetting the drain potentials of said amplifier transistors and read circuits for reading the respective signal charges stored in said storage capacities, coupling capacitors being arranged between the vertical signal lines and the gate of amplifier transistors, sampling transistors being connected between the drains and the gates of said amplifier transistors.